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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/706,490	11/03/2000	Rainer Bruhn	VAL-500-A	6485

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EXAMINER

LE, DANG D

ART UNIT PAPER NUMBER

2834

DATE MAILED: 01/09/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/706,490

Applicant(s)

BRUHN

Examiner

Dang D Le

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,6,11,12 and 19 is/are rejected.
- 7) ☒ Claim(s) 4,7-10 and 13-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:
 - Page 6, line 15, delete "." after "are".
 - Page 6, lines 7, 8, 16, and 17 (two places), replace "gear box 2" with – motor housing 2 – in order to differentiate with "the gear box 33".
 - Page 8, line 29, replace "33" with – 30 --.
 - Page 9, line 5, replace "3" with – 30 --.

Appropriate correction is required.

Claim Objections

2. Claims 1, 4 and 17 are objected to because of the following informalities:
 - Claim 1, line 4, replace "the drive" with – the electric motor drive --.
 - Claim 4, line 4, insert – and – before "locking".
 - Claim 17, lines 2 and 3, changes made to the claim are not clear.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, it is indefinite because of the gear boxes (2) and (33) disclosed in the specification and recited in the claim. The examiner agrees "the drive shaft located (8) in a gear box (2)" as recited in line 2 of the claim and shown in page 6 of the specification. However, the "wrap-spring brake (27)" is "working against the gear box (33)" as disclosed in page 9 of the specification and Figure 1. Figure 1 shows "the wrap-spring brake (27)" located in "the gear box (33)". Therefore, the "wrap-spring brake (27)" cannot work against "the gear box (2)" as recited in lines 2 and 5 of the claim.

In addition, "the annular element (34)" diverts a moment of torsion "into the gear box (33)" as shown in Figure 1 instead of "into the gear box (2)" as claimed in last two lines of the claim.

It is recommended the claims be rewritten and "a gear box" in line 2 of claim 1 be replaced with -- a motor housing --. The shaft 8 is located in the housing 2 instead of the gear box 33. Reciting a gear box for a reducing gear and a driven shaft in claim 1 is also recommended.

Moreover, it is not clear how the "drive shaft and the gear input shaft work together" and how "a moment of torsion" is "introduced by the drive shaft" as recited in lines 5, 6 and 9 respectively. Should "the drive shaft" in line 5 and 9 be changed to -- the driven shaft --?

Moreover, there is insufficient antecedent basis for the following limitation in the claim. Claim 19 recites the limitation "the individual components" in line 2.

Other claims are dependent.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 3, 5, 11 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wussow et al. (6080075) in view of Ciolli (5399129).

Regarding claim 1, Wussow et al. show a tube motor (Figure 3) with an electric motor drive (30) with a drive shaft (62) located in a gear box (28), with a reducing gear (32, 34) with a driven shaft (36) coupled with the drive shaft (62) via a gear input shaft (88) and, for rotary securing of the driven shaft (36) especially when the drive (14) is disengaged, with a wrap-spring brake (100) working against the gear box (28, through coil housing 102), while the drive shaft (62) and the gear input shaft (88) work together with the wrap-spring brake (100).

Wussow et al. do not show an annular element mounted free of torsion on the gear box and positioned between the wrap spring and the gear box, the an annular element diverts into the gear box a moment of torsion introduced by the drive shaft.

Ciolli shows an annular element (94) mounted free of torsion on the gear box (12) and positioned between the wrap spring (90) and the gear box, the an annular element diverts into the gear box a moment of torsion introduced by the drive shaft (30) for the purpose varying the speed reduction ratio.

Since Wussow et al. and Ciolli are all from the same field of endeavor, the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to mount an annular element free of torsion on the gear box and position it between the wrap spring and the gear box, the an annular element diverts into the gear box a moment of torsion introduced by the drive shaft as taught by Ciolli for the purpose discussed above.

Regarding claim 3, it is noted that Ciolli also shows the annular element (94) can be locked into the gear box (12).

Regarding claim 5, it is noted that Ciolli also shows the reducing gear having a planetary gear drive (46), while the planetary gear drive has a sun wheel (44) as a gear input shaft.

Regarding claim 11, it is noted that Ciolli also shows the sun wheel having a core (76).

Regarding claim 19, it is noted that Wussow et al. also show the individual components of the tube motor can be locked together for the installation of the tube motor (Figures 1-4).

7. Claims 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wussow et al. in view of Ciolli as respectively applied to claims 1 and 5 above, and further in view of Kusumoto et al. (5675204).

Regarding claim 2, the motor of Wussow et al. modified by Ciolli includes all of the limitations of the claimed invention with a jacket surface of the annular element (94) facing toward the inner side of the gear box (12) having a corresponding inner toothing except for inner side of the gear box having an inner toothing.

Kusumoto et al. show inner side (Figure 1) of the gear box (20a) having an inner toothing (20b) for the purpose of providing torque transmission.

Since Wussow et al., Ciolli and Kusumoto et al. are all from the same field of endeavor, the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to add in inner side of the gear box with an inner toothing as taught by Kusumoto et al. for the purpose discussed above.

Regarding claim 6, it is noted that Kusumoto et al. also show the planetary gear drive having planets (7), which roll off on the inner toothing (20b) on the inner side of the gear box.

8. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wussow et al. in view of Ciolli as applied to claim 11 above, and further in view of Ozaki (4587450).

Regarding claim 12, the motor of Wussow et al. modified by Ciolli includes all of the limitations of the claimed invention except for the core having one of a hexagonal cross section and a Torx cross section.

Ozaki show the core (Figure 6b) having one of a hexagonal cross section and a Torx cross section for the purpose of supporting the rotor.

Since Wussow et al., Ciolli and Ozaki are all from the same field of endeavor, the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to make the core with one of a hexagonal cross section and a Torx cross section as taught by Ozaki for the purpose discussed above.

Allowable Subject Matter

9. Claims 4, 7-10, and 13-18 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: the record of prior art does not show a tub motor comprising:

- the annular element having one of locking hooks and locking indentations on its periphery which can be engaged together with one of locking indentations and locking hooks respectively located on the inner side of the gear box as shown in claim 4.
- The side of the sun wheel facing toward the wrap spring having a plurality of circular lands curved in cross section, around which the wrap spring is positioned as shown in claim 7. claims 8-10 and 13-18 are dependent.

Information on How to Contact USPTO

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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dang D Le whose telephone number is (703) 305-0156. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3431 for regular communications and (703) 305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

DDL
January 5, 2002

DL

Dang D Le